ORDER

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

1100.127C

5/22/91

SUBJ: AIRWAY FACILITIES SECTOR CONFIGURATION (RIS: AF 1100-1)

1. PURPOSE. This order sets forth FAA's policy for the organization and configuration of the Air Route Traffic Control Center (ARTCC) and the General National Airspace System (GNAS) Airway Facilities sectors, and reflects the straightline Airway Facilities organization.

2. DISTRIBUTION. This order is distributed to the director level within the Office of Budget, Office of Personnel, Logistics Service, and the Office of Management Systems, to the branch level in the Systems Maintenance Service and the NAS Transition and Implementation Service in Washington headquarters; to branch level in the regional Airway Facilities and Logistics divisions; to the regional administrators, and to all Airway Facilities sectors, sector field offices, sector field units, and sector field office units with a standard distribution.

3. CANCELLATION. Order 1100.127B, Airway Facilities Sector Configuration (RIS: AF 1100-1), dated September 23, 1981, is canceled.

4. BACKGROUND.

a. The National Airspace System (NAS) has become so large and complex that it is imperative for FAA to configure and organize sectors to improve maintenance effectiveness and utilize resources efficiently.

b. The Maintenance Philosophy Steering Group (MPSG) was commissioned in 1976 to develop a new maintenance concept. The results of the MPSG effort is published in Order 6000.27, Transmittal of Maintenance Philosophy Steering Group (MPSG) Report. This order initiated the transition from a sector organization designed for on-site, periodic, single-level maintenance of numerous facilities to an organization characterized by solid-state systems, remote maintenance monitoring, multilevel maintenance, and a limited number of manned facilities. The challenge of the 1990's is for increased National Airspace System safety, capability, efficiency, productivity, and better quality of work life.

c. Sectors are becoming more self-sufficient in accomplishing functions such as engineering, logistics, and administrative support in areas of maintenance operations, systems operations, technical support, and program support.

d. The maintenance concept and associated system technology requires a transition from direct maintenance positions at remote locations to more centralized work centers and maintenance control centers (MCC).

e. Types of work and sector functions will change. Redeployment of direct maintenance personnel and functions into more centralized locations will make previous distinctions between direct maintenance and maintenance support work categories less clearly defined. With the advent of MCC and RMM solid-state technologies, capability to monitor and restore systems/services is dispersed throughout various sector organizational elements. Moreover, sectors may be assigned additional functions such as engineering support, structure and grounds maintenance, special maintenance program accomplishment, and field training. Provisions for organizational versatility, adjustments within overall authorized staffing, and recognition of additional sector functions are necessary to meet these new sector operational requirements. A degree of organizational flexibility is required through the 1990's.

5. EXPLANATION OF CHANGES.

a. This order reflects organizational title changes from Program Engineering and Maintenance Service to Systems Maintenance Service.

b. This order provides guidance and latitude for regions to implement the maintenance concept within individual regional resources and schedules.

c. A standard sector organizational model is provided in terms of major functions which may be assigned to sector organizational elements or individual positions. This approach will allow adequate flexibility to assimilate rapidly changing technology and systems and yet provide the degree of uniformity which is necessary to ensure execution of national policies and programs.

d. A new requirement in paragraph 7 requires the regions to submit a transition plan.

6. REPORTS. Airway Facilities (AF) sector configuration and organizational data, Airway Facilities Sector Configuration Report, RIS: AF 1100-1, shall be forwarded annually to the Maintenance Operations Division, ASM-200, by the last working day in December. The report shall be based upon the workload generated positions as of October 1 of that year and shall consist of a position organization chart (POC) including separate elements for each supervisory or group of managerial functions. Each element shall be appropriately titled and include the classification, grade, and number of positions generated.

7. TRANSITION PLAN.

a. The regional Airway Facilities divisions shall submit a 5-year transition plan, on a sector-by-sector basis, which reflects transition to end state of the standard organization by the end of fiscal year 1995. The plans shall be submitted to the Maintenance Operations Division, ASM-200, for Systems Maintenance Service review and final approval by the Associate Administrator for Airway Facilities, AAF-1. Each transition plan shall include the following:

(1) Position organization charts, planned grade levels, and narratives (one for each year of transition).

(2) Identification of resources.

(3) Staffing plans.

(4) Priority and methods of selection for filling positions.

(5) Union coordination activities, if necessary.

b. The transition plan or a schedule for developing the plan shall be submitted no later than 90 days from the date of this order.

c. ASM-200 shall submit status reports and actions to the Associate Administrator for Airway Facilities, AAF-1, on a schedule and basis determined by the Director, Systems Maintenance Service.

d. Regional Airway Facilities divisions may implement the transition to the standard organization upon receipt of their approved transition plan.

8. POLICY.

a. Airway Facilities sectors shall be established to efficiently manage, direct, and support the operational, technical, and engineering requirements of the National Airspace System (NAS) in a given geographical area. In accordance with Order 1380.40B, Airway Facilities Sector Level Staffing Standard System, the goal shall be to staff each sector with sufficient personnel having appropriate knowledge and skills to accomplish assigned functional responsibilities.

b. Sector configurations and organizations shall be designed to accomplish the primary sector mission of providing cost-effective service to NAS users and be compatible with established national

position classifications, national labor agreements, career patterns, development and training programs, the principles of sound position management, and rapidly changing technology and systems. Order 1380.40B shall be revised as necessary to comply with this and/or any subsequent revisions to this document.

c. The approval for the standard sector organization structure is hereby delegated to the Associate Administrator for Airway Facilities, except for actions explicitly reserved for the Administrator in FAA Order 1100.1A, FAA Organization - Policies and Standards. Sector organization and position titles are defined in Appendix 2, Sector Mission and Functions, of this order. Classification actions impacting the title, grade levels, or series of these positions will be accomplished by national classification advisories as directed by the Associate Administrator for Airway Facilities. Regional Airway Facilities division managers may delegate functions to sectors in accordance with authorities defined in appendices of this order.

d. Regional Airway Facilities division managers are delegated the authority to develop and classify career ladder positions targeted toward the standard positions identified by this order and in support of employee development and affirmative action objectives. This authority shall not be redelegated below the division manager level.

e. Sectors shall be provided with technical maintenance personnel, both electronic and environmental, as well as managerial, administrative, engineering, and logistics personnel as required to accomplish the assigned Airway Facilities sector functions. Regions should endeavor to organize sectors so that maximum self-sufficiency and practical functional capability exist. Each sector should be large enough to generate the staffing and support to meet its own engineering/technical, operations, NAS planning, and sector internal program analysis needs.

f. Changes in AF sector configuration and organization as proposed by regional Airway Facilities division managers shall be forwarded to the Systems Maintenance Service for processing. Approval will be in accordance with the provisions of paragraph 7c.

g. Periodic assessments of regional implementation of the maintenance concept will be conducted by the Airway Facilities Evaluation Staff, AAF-20, as part of an ongoing evaluation.

9. SCOPE. The provisions of this order apply to all regions.

James B. Busey
Administrator

APPENDIX 1. SECTOR GUIDELINES, CONFIGURATION, AND ORGANIZATIONAL ELEMENTS

1. GENERAL GUIDELINES.

a. Cost-effective restoration capability and response time shall be a major consideration in sector configuration, organizational structure, and locations of field offices.

b. Supervisor/Subordinate Ratio. Priority should be given to the establishment of the most effective supervisor/subordinate ratio to optimize span of control and operational efficiency considering organizational and response requirements.

c. Staff and support positions shall be established consistent with sector functions assigned, numbers and types of facilities, systems technology, sound position management principles, and operational cost-effectiveness.

d. Accountability for sector performance and results shall be emphasized, commensurate with functions, authority, and responsibility assigned. Continuing review shall be made to ensure responsibilities are carried out.

e. Staffing standards for Airway Facilities sectors shall be used as the basis for staffing distribution.

2. SECTOR CONFIGURATION AND ORGANIZATIONAL ELEMENTS.

a. Sector Boundary Consideration. The following factors shall be considered when configuring sector boundaries (not necessarily in priority order):

(1) Facility population, type, density, dispersion, complexity, and state of technology.

(2) Direct workload for the total sector on the order of 100 or more employee-years.

(3) Geography, topography, and regional weather conditions.

(4) Travel modes, times, availability, and conditions.

(5) Travel requirements for direct facility maintenance, restoration activities, and staff/support/supervision.

(6) Future facilities and equipment programs.

(7) Sector size in relation to cost-effectiveness of management, support, and administrative positions.

(8) Geographic size and facility population of GNAS sectors should be approximately equal.

(9) Non-Federal facility activity.

b. Sector Configuration Considerations. The following factors shall be considered when configuring a sector (not necessarily in priority order):

(1) Sector cost-effectiveness, e.g., facility reliability/availability, NAS user confidence and sector functional results compared to personnel, training, supplies, contractual, and other operating costs for a given facility/manpower population.

(2) Internal sector capability to provide technical and operational support for responsibilities delegated by the region.

(3) External sector support required, e.g., regional field maintenance parties (FMP) and critical and emergency repairs to structures and grounds (CERSG) projects (formerly special maintenance projects), engineering, personnel administration, logistics, and administrative support.

(4) Quality of work life, e.g., optimize job enhancement/enrichment, career development/progression, environment, geographic locations, and labor management relations.

(5) Ability to accommodate the major NAS system technology changes already underway and anticipated.

(6) Capability to provide a smooth transition while implementing the maintenance concept and assimilating new systems.

(7) Minimize adverse impact on personnel, facility performance, and service to NAS users when reconfiguring sectors.

c. Sector Headquarters Consideration. The following factors shall be considered when determining sector headquarters locations (not necessarily in priority order):

(1) Principal focal point of user activity, e.g., air route traffic control center (ARTCC), level V terminal, etc.

(2) Major airports within the geographic boundaries of the sector.

(3) Effective means of communications and travel from the work center to the various sub-elements of the organization.

(4) Suitable office and technical (work center) space and where the office of the sector manager is available to local officials and representatives of the aviation community.

(5) Centralized transportation center within the sector boundaries.

d. Other Considerations. Additional factors must be considered as experience is gained with upgraded solid-state equipment and remote maintenance monitoring (RMM) systems. For example, significant demonstrated improvements in facility reliability, decreased routine maintenance travel to facilities, and enhanced remote facility adjustment capability would decrease the requirement for a sector field office or allow sector boundaries to encompass larger geographic areas.

e. Sub-elements of the AF Sector. The following are the standard organizational titles and sub-elements for use when establishing the sector organization.

(1) Sector Field Office Level II (SFO II).

(a) This consists of a geographic portion of a sector with a significant part of the total sector's facility responsibilities. The maintenance workload of the sector is normally distributed between more than one SFO II office. The number of SFO II offices will be based on changes in sector needs during the transition from on-site periodic maintenance to remote maintenance monitoring (RMM).

(b) SFO II offices may be collocated with the sector office or at locations remote from sector headquarters where the need for on-site second level management would contribute to the effective operation of the sector.

(c) SFO II offices receive technical and program support directly from the sector staff.

(d) Subordinate sector field office managers and unit supervisors (typically three or more) report to the SFO II manager.

(e) The SFO II manager reports directly to the assistant sector manager and will normally be the second level supervisor of the technicians.

(2) Sector Field Office Level I (SFO I). An SFO I may be established in accordance with watch coverage requirements, most

effective utilization of manpower resources, and the number and type of facilities. It is normally remote from an SFO II office. The SFO I provides a more efficient operation where a sector encompasses a large geographical area, where travel time to the facilities becomes a major consideration, or when justified by overriding system differences at collocated facilities. Response time for facility restoration is a controlling factor. The SFO I's are responsible for the maintenance program of assigned facilities. The SFO I manager reports directly to the Airway Facilities assistant sector manager, or second level sector field office manager, as appropriate.

(3) Units. A unit is associated with either an AF sector or a sector field office.

(a) The organizational structure of a unit is such that skills and knowledge requirements for maintenance of a group of facilities or a facility system within a sector are available within the unit. Supervision and direction of technical maintenance activities are provided by a unit supervisor, who reports to the sector field office manager, operations manager, or assistant sector manager as assigned.

(b) Unit technicians may be assigned to cover any combination of watch schedules without direct supervision during periods when the unit supervisor is not on duty.

(4) Sector Field Unit (SFU). This is a geographically separated portion of a sector field office or unit which does not have adequate justification for a supervisory position. Assigned personnel may report directly to an SFO manager or unit supervisor.

(5) Technical Support Staff (TSS). The Technical Support Staff is the principal sector staff support element for programs regarding system hardware and software and engineering/technical support.

(6) Program Support Staff (PSS). The Program Support Staff is the principal sector staff element for programs pertaining to human resources, money, and materiel.

(7) NAS Plan Program Staff. At the discretion of the Airway Facilities division manager, a NAS Plan Program Staff may be established at the sector level to provide liaison/coordination of NAS Plan effort with Facilities and Equipment (F&E) and Air Traffic (AT) operations. If established, the need for this staff may diminish as NAS integration activities are reduced.

(8) Maintenance Operations Group. At the ARTCC sector, the Maintenance Operations Group is the focal point for all efforts

concerned with ensuring that NAS facilities, systems, and equipment perform their intended function and conform to national and regional policy, procedures, and standards. This function is performed by the SFO offices in the GNAS sector.

(9) Systems Operations Group. Serves as the principal sector element of the Airway Facilities division to plan, direct, coordinate, monitor, and accomplish, (as appropriate) the activities associated with the real-time (on watch) management of assigned NAS systems/facilities at the service integrity level. Activities associated with the management of remote maintenance monitoring (RMM) functions is a significant aspect of this group.

APPENDIX 2. SECTOR MISSION AND FUNCTIONS

1. MISSION. To operate and maintain all National Airspace System (NAS) facilities within the sector, ensuring that performance is within established tolerances of accuracy and meets operational requirements of availability and reliability to NAS users; to support the expansion and modernization of the NAS; and to efficiently and effectively manage available resources.

2. STRUCTURE. The functional organizational structure of a standard Airway Facilities sector is shown in Appendix 2, Figure 1. Appendix 2, Figure 2, shows a generic ARTCC sector organization, and Figure 3 shows a generic GNAS sector organization.

3. GENERAL. The Airway Facilities sector is the primary line element of the regional Airway Facilities division responsible for execution of the NAS facilities maintenance program. The sector advises and assists the regional Airway Facilities division manager regarding the implementation and execution of policies, guides, and standards, and with the evaluation of operations. The sector's capabilities are being enhanced to evolve to a self-contained and self-sufficient work center responsible for the total maintenance and certification of numerous facilities. The sector organization has the responsibility of monitoring, controlling, maintaining, and certifying facilities and has, as an integral part, the essential support functions to ensure its success via FAA/contractor personnel.

4. Sector Organizational Elements and Functions. Sector functions have evolved within four major categories: maintenance operations, systems operation, technical support, and program support. While many of the functions are unique and performed only in one of the organizational elements, some functions are accomplished in more than one element. For example, identification, restoration, and repair of failed facilities, and/or systems and equipment is performed by the systems operations element to the extent feasible. It is also accomplished by the maintenance operations element. There are incidents which may require a response from many of the elements (e.g., aircraft accidents could involve systems operations, maintenance operations, technical support, and program support). Employee certification is accomplished by program support; service and systems certification is accomplished by systems operations; and facility certification is accomplished by maintenance operations.

a. Maintenance Operations deals primarily with the day-to-day operation and maintenance of assigned facilities and the management of resources for that purpose. It serves as the principal sector

element of the Airway Facilities division to ensure NAS facilities, systems, and equipment perform their intended function and conform to national and regional policy, procedures, and standards. Maintenance operations functions include the following:

(1) Directs, manages, and administers the sector maintenance program; establishes objectives and goals; and develops methods, schedules, priorities, supplementary standards, and other procedures required (including contract maintenance) to efficiently and effectively utilize available resources to accomplish the program.

(2) Conducts preventive and corrective maintenance programs for the assigned facilities, systems, and equipment.

(3) Accomplishes timely restoration and repair of failed facilities, systems, and equipment.

(4) Performs technical certification of assigned facilities, systems, and equipment.

(5) Conducts initial facility performance analysis on declining or poor performing facilities, corrects problems, or requests engineering/technical support.

(6) Performs modifications to facilities, systems, and equipment, of both hardware and software variety, as directed from national and regional offices.

(7) Develops and supports maintenance operations software programs.

(8) Supports the planning and implementation of assigned F&E/CERSG/FMP projects.

(9) Maintains safe working conditions and the overall security and general appearance of facilities, systems, and equipment.

(10) Arranges for the most cost-effective means of travel and transportation to conduct the maintenance program.

(11) Maintains facility documentation.

(12) Responsible for efficient and effective use of human resources.

(13) Coordinates with others, both within and outside the agency, in the conduct of the maintenance program.

(14) Operates remote maintenance monitoring (RMM) systems.

(15) Provides post aircraft accident investigations/ certifications.

(16) Responsible for technician/mechanic proficiency assurance programs and policies.

(17) Supports the sector technical training activities.

(18) Manages and administers the sector labor relations within the field offices.

(19) Responsible for materiel management program for assigned facilities.

(20) Develops and implements budget programs for assigned area of responsibility.

(21) Responsible for the maintenance of telecommunications networks.

(22) Conducts evaluations to determine assigned program effectiveness and directs follow-up actions to correct deficiencies.

(23) Conducts JAI's in conjunction with F&E representatives.

b. Systems Operation deals primarily with the planning, directing, coordinating, monitoring, and maintenance activities associated with the management of assigned NAS systems/facilities. It serves as the principal sector element of the Airway Facilities division to plan, direct, coordinate, monitor, and accomplish (as appropriate) the activities associated with the real-time (on-watch) management of assigned NAS systems/facilities at the service integrity level. Systems operations functions include the following:

(1) Plans, manages, and directs the operation and use of all NAS facility/service systems used by or interfacing with the sector.

(2) Provides the highest level of management presence regarding the integration of services/systems into the NAS in the real-time, operational environment.

(3) Develops requirements for operations programs and execution of those programs as related to human resources, funds, materials, equipment, and training.

(4) Monitors current facility/service and performance status, and following identification of failure or degradation, performs notification/coordination with Air Traffic and other appropriate individuals/organizations.

(5) Provides maintenance control of assigned facilities including remote maintenance monitoring (RMM).

(6) Performs assigned RMM service/system/facility certification.

(7) Accomplishes facility/service restoration.

(8) Maintains and evaluates service/facility performance and status documentation. Works closely with the technical support staff, providing trend analysis reports and daily information on facility/service performance.

(9) Coordinates and directs scheduled facility shutdowns which could have major or extended impacts on the movement of aircraft.

(10) Develops and implements the budget program for operational area of responsibility.

(11) Initiates control actions to optimize facility operation.

(12) Coordinates and/or accomplishes corrective and preventive maintenance.

(13) Serves as focal point and coordinator for all aircraft accidents/incidents and provides reporting on these occurrences.

(14) Provides consultation and coordination between Airway Facilities and Air Traffic personnel.

(15) Responsible for accurate upward reporting of facility status via facility reporting systems, including regional division management and the National Maintenance Control Centers.

(16) Responsible for coordinating restoration activities associated with telecommunications services.

(17) Conducts evaluations to determine assigned program effectiveness and directs follow-up actions to correct deficiencies.

c. Program Support. Serves as the principal support element within the sector to administer all Airway Facilities division programs pertaining to human resources, money, and materiel, including personnel management, technical and administrative training, certification and proficiency development, safety, management systems, logistics, emergency preparedness, security, budget, planning and programming, accounting, and administrative requirements. Program support functions include the following:

(1) Develops integrated operating budget requirements for the entire sector.

(2) Monitors, reports, and controls assigned appropriations and expenditures.

(3) Develops consolidated F&E budget submissions.

(4) Develops integrated training budget submission.

(5) Provides overall policy and procedural guidance relating to emergency readiness preparation, such as bomb threats, civil disorders, enemy attacks, and natural disasters.

(6) Administers training and personnel certification programs.

(7) Conducts and arranges for technical training classes and on-the-job training. Develops locally needed technical and administrative training courses, as required, when not available from outside the sector.

(8) Develops and evaluates technician proficiency programs.

(9) Provides and arranges for developmental technical training from initial employment to the journeyman level.

(10) Directs and administers the security program, including physical, internal, and Automated Data Processing (ADP).

(11) Develops, monitors, and administers the sector's Equal Employment Opportunity (EEO) and Affirmative Action plans and other civil rights activities.

(12) Provides for internal staff assistance in the communications, planning, and coordination with Air Traffic, military, airport managers, aviation users, and other agency or Government representatives.

(13) Performs all the internal operational services related to personnel management program administration including employment, compensation programs, employee assistance, survey, and supervisory identification and development.

(14) Provides guidance on and administers the labor management relations program for the sector.

(15) Conducts a wide variety of internal management systems studies, evaluations, projects, and surveys, such as engineered staffing standards, micrographics, position management, work performance effectiveness, etc., which promotes cost effective use of assigned resources.

(16) Directs, manages, and administers the sector technical and administrative automation activities, including management information systems.

(17) Manages, develops, and provides guidance and support on all logistics related programs; e.g., contracts, materiel management, procurement, motor fleet management, administrative services, and real and personal property.

(18) Provides library and directive services.

(19) Administers travel program, including advisory service programs.

(20) Administers Department of Transportation (DOT) drug testing program.

(21) Serves as the focal point for employee involvement (EI) processes/programs.

(22) Serves as the focal point for development, review, and reporting of goals and objectives.

(23) Directs and administers the sector occupational safety programs.

(24) Conducts evaluations to determine assigned program effectiveness and directs follow-up actions to correct deficiencies.

(25) Maintains the Facilities Services and Equipment Profile (FSEP).

d. Technical Support. Serves as the principal support element within the sector on all matters pertaining to system hardware/software and engineering/technical support, including technical programs and planning, frequency management and leased communications, engineering assistance, technical inspections, facility performance improvements, sector CERSG/F&E/FMP projects,

joint acceptance inspections (JAI), test and working equipment, non-Federal facilities, and facility technical documentation. The TSS provides technical support to the operations managers as required for efficiency and continuity of NAS operations. This is primarily in support of technical and operational software, equipment changes, modifications, enhancements, or for problems of a long-term nature where continuity of effort must be maintained. Technical support functions include the following:

(1) Develops technical facility requirements for inclusion in annual budget requests; e.g., F&E, operations test and working equipment, CERSG, FMP, leased communications.

(2) Develops compatible sector maintenance, construction, and installation program objectives which will improve facility performance within the sector.

(3) Administers an effective test equipment repair and calibration program.

(4) Provides engineering/technical support in the resolution of unique technical problems within and outside the sector when assigned by the sector or assistance is requested by the AF division or the national engineering support divisions, ASM-400 and ASM-600. Provides technical reports on problems to region and sector elements. Supports regional and national engineering as assigned.

(5) Implements and monitors environmental and energy conservation programs.

(6) Evaluates facility and system performance to improve service to NAS users.

(7) Develops technical improvements (hardware and software) which will enhance the NAS. Evaluates all technical modifications, suggestions, and NAS Change Proposals (NCP) developed within and outside the sector as required.

(8) Coordinates with other sectors, AF divisions, ASM-400, ASM-600, and external entities on equipment problems, maintenance activities, or procedures.

(9) Develops aircraft accident/incident procedures and provides investigation assistance.

(10) Provides assistance to the systems operations group in evaluating pilot reports and Air Traffic discrepancy reports.

(11) Serves as the focal point within sector for joint FAA/military and non-Federal facility programs.

(12) Supports regional level facilities inspection program.

(13) Provides technical guidance and assistance for safety standards, including agency Occupational Safety and Health Administration (OSHA), and fire and electrical codes.

(14) As assigned, provides the maintenance, analysis, documentation, validation, and modification of Airway Facilities operational and diagnostic software as it pertains to current and future systems.

(15) Maintains necessary technical documentation for the technical support staff.

(16) Provides certification performance examiners, system instructors, and accomplishes technical relief functions as assigned in support of sector personnel certification/training and maintenance programs.

(17) Reviews regionally generated F&E engineering plans for accuracy, completeness, and operational impact, providing comments and recommendations and engineering support as appropriate. Coordinates all F&E activities with sector elements. Represents the sector during project implementation and JAI's.

(18) Develops engineering plans and monitors implementation of sector accomplished F&E, CERSG, and FMP projects.

(19) Serves as the field focal point within the sector on spectrum engineering and telecommunications programs.

(20) Evaluates airspace cases and airport plan proposals for proposed construction within the sector.

(21) Provides membership on national/regional teams of expertise for solution of evasive or system-wide hardware and software problems.

(22) Responsible for identifying and administering telecommunications service requirements.

(23) Directs, manages, and administers the sector hazardous waste and environmental preservation programs.

(24) Conducts evaluations to determine assigned program effectiveness and directs follow-up actions to correct deficiencies.

Figure 1. Summary Of Functional Organizational Responsibilities

PROGRAM SUPPORT

Staff assistance for sector-wide program development, guidance, monitoring, and administration relative to manpower, money, and materiel. Included are:

Training, certification, proficiency development career development, SIDP, and retention.

Organization staffing, personnel management, recruitment, internal placement, and merit promotion.

Compensation (FLSA/Title 5 & Merit Pay).

Equal Employment Opportunity (EEO).

Safety/OSHA.

Logistics, contract administration, procurement, property accountability, material management, motor fleet management.

Budgeting and accounting.

Travel program.

Emergency Readiness and Security.

Administrative program management.

Management Systems Studies.

Library and Directive Services.

Privacy and Freedom of Information Act.

Labor and management relations, drug testing, Employee Involvement (EI), Employee Assistance Program (EAP), and employee surveys.

Goals and Objectives, management information systems, and administrative automation.

Facility Master File (FMF), Precommissioned Facility File (PFF), and Facility Service and Equipment Profile (FSEP).

SYSTEMS OPERATIONS

Planning, managing, and directing the sector's program for operations including the use of all systems used by or interfacing with the sector.

Represents sector management in the real-time operation environment.

Development of requirements for operations programs and execution of those programs as they relate to manpower, funds, materials, equipment, and training.

Monitor and report current facility performance and status.

Maintenance control of assigned facilities including RMM.

Aircraft accident coordination.

Service/system RMM certification.

Facility/system RMM restoration.

Facility performance and status documentation.

Facility shutdown coordination.

Initiates control actions to optimize facility operation.

Corrective and preventive maintenance.

Internal/external consultation and coordination.

MAINTENANCE OPERATIONS

Directs, manages, and administers the overall maintenance program for assigned facilities.

Compliance with policies, requirements, and standards, including technical proficiency assurance.

Development of requirements for maintenance programs and execution of these programs as they relate to manpower, funds, materiel, equipment, and training.

Facility performance analysis.

Facility restoration.

Corrective and preventative maintenance.

Facility certification/modifications/ improvements.

Facility documentation.

Development of and support of maintenance operations software programs.

Support technical training program as required.

Interface with regional and national support groups. Coordinates with others in the conduct of the maintenance programs engineering.

Conduct JAI's.

Post aircraft accident investigation and certification.

Facility safety, security, and appearance.

Supports design, engineering planning, and accomplishment of assigned F&E, FMP, and CERSG projects.

Operates RMM systems.

TECHNICAL SUPPORT

Sector level engineering support.

Analyze system performance trends.

Coordinate and conduct sector technical evaluations as assigned.

Provide sector software support for MMS; i.e., maintenance logs, outage reporting, and administrative programs.

Manage sector modification and NCP programs.

Engineering assistance for major modifications.

JAI inspection assistance.

Engineering assistance on inspection discrepancies.

Airspace evaluations.

Design and engineer sector CERSG projects.

Program Manager for major F&E installations.

Represent sector at technical conferences.

National and regional technical team membership.

Develop facility improvement plans.

Integrate new systems, coordinate, and plan flight checks.

Aircraft accident investigation.

OSHA, environmental, energy conservation, and technical support.

Quality assurance and training support.

Administers the test equipment program.

F&E and Operations budget input.

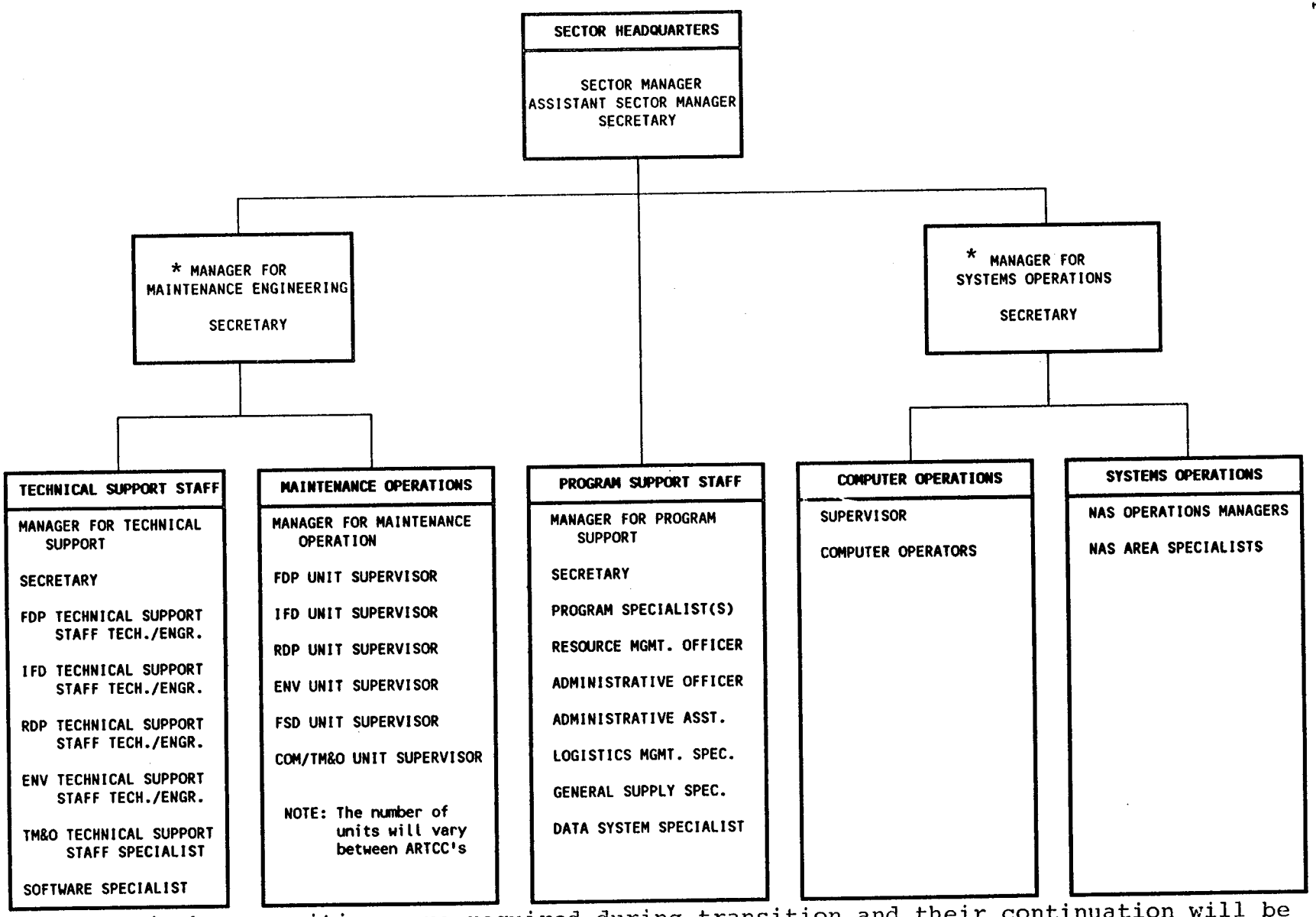
Administers the non-Federal facilities program.

Focal point for JSS/JRPG coordination.

Maintains technical library.

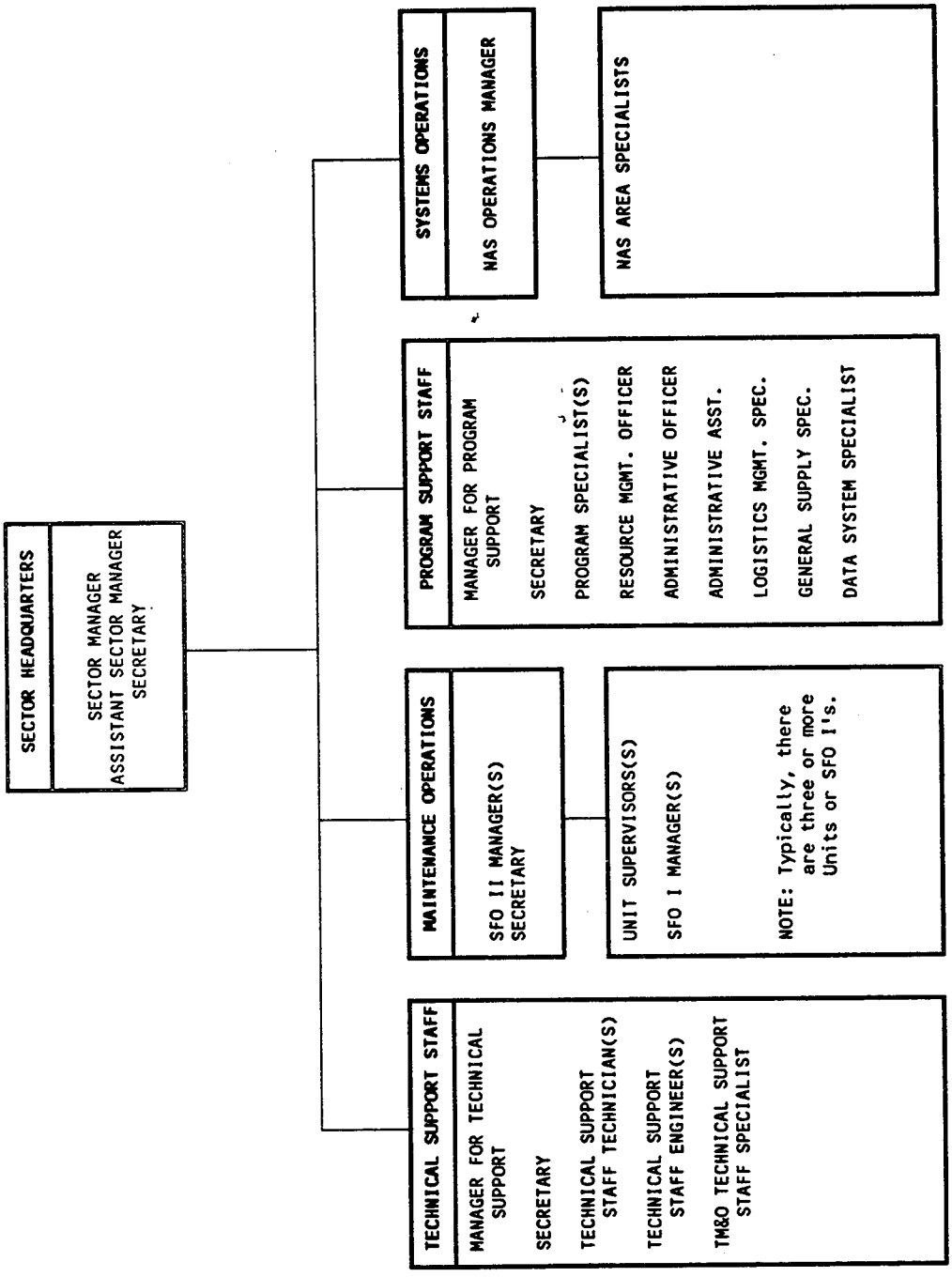
TM&O and Spectrum Engineering.

FIGURE 2. GENERIC ARTCC ORGANIZATION CHART



* These positions are required during transition and their continuation will be assessed at end state.

FIGURE 3. GENERIC GNAS ORGANIZATION CHART



APPENDIX 3. ENGINEERING AND TECHNICAL SUPPORT RESPONSIBILITIES OF AIRWAY FACILITIES DIVISION ENGINEERING BRANCHES AND SECTOR TECHNICAL SUPPORT STAFF

1. PURPOSE. This policy statement establishes operational procedures for integrated region/sector maintenance engineering and technical support programs and provides guidelines for related sector and regional operations engineering/technical support responsibilities.

2. DEFINITIONS.

a. Sector Engineering Support. Daily engineering support to operational electronic/plant systems, equipment, and assigned installation projects. This includes providing continuing contacts for engineering advice and resolution of technical problems, independently, even in those areas where guidelines are lacking. These and other engineering functions accomplisned by engineering branches may be delegated to sectors. Once projects are assigned, the sectors will deal directly with the branch involved.

b. Regional Engineering Support. Daily engineering support to program management, standardization, and regional/national policy compliance. This includes regional engineering reviews for policy, program consistency, standardization, resource management, Capital Investment Plan (CIP) compatibility, evaluations, and advisories on the effectiveness of work and proposals of others in resolving complicated and critical problems in specialized areas.

3. POLICY. Under the guidelines of this order, sectors are delegated engineering functions relating to NAS systems as assigned by the Airway Facilities division manager. Duplication of overall program and functional responsibilities shall be avoided. Specific delegations, in addition to those listed in paragraph 8, shall be documented by a regional supplement to this order and Order 1100.5, FAA Organization - Field.

a. The Manager for Technical Support will supervise the technical support staff (TSS) and function under the direction of the sector manager. The TSS will provide guidance on FAA standards, engineering functions, and professional staff work.

b. The Systems Maintenance Engineering Branch, AXX-460, will be the central operations engineering coordination point for the sector TSS in the Airway Facilities division. The TSS will function as an extension of the Systems Maintenance Engineering Branch for regional engineering support functions assigned to the sectors.

c. The technical support staff and the regional engineering branches are responsible for the application of professional

engineering expertise in regional technical programs to accomplish program goals and objectives in the most effective and expedient manner. Close coordination and cooperation are critical to the accomplishment of regional responsibilities in the operation and modernization of the NAS.

4. ENGINEERING SUPPORT FUNCTIONS. The sector TSS will have two major engineering functions. First, it will provide primary sector maintenance engineering support for major systems, subsystems, and equipment. Second, it will provide on-site engineering support for the integration of new systems and their interface into the operational environment; and when assigned, serve as the FAA Technical Officer's Representative (TOR) providing contractor interface with Air Traffic and Airway Facilities operational requirements in the National Airspace System (NAS).

a. Regional engineering branch managers are responsible for regional engineering support and for overall regional engineering programs. The sector TSS will be assigned engineering duties which encompass such issues as ensuring regional/national program compliance, engineering project reviews, evaluations, advisories on effectiveness, technical adequacy, and suitability of work and proposals of others in resolving problems in the specialized areas.

b. Integration of resources between sectors/branches are necessary due to the number, variety, and complexity of equipment and the difficulty in maintaining a high level of technical expertise on all systems in each region/sector. When assistance from outside the sector is required, the sector manager has the option of coordinating directly with ASM-400 and ASM-600, regional engineering branches, or other sectors for assistance.

5. ENGINEERING SUPPORT RESPONSIBILITIES - SECTOR TSS. The TSS serves as the principal support organization within the sector on all matters pertaining to system hardware, software, and facility/system engineering/technical requirements.

a. Duties performed for the regional office engineering branches:

(1) Develops technical improvements (hardware and software) which will enhance the NAS, and evaluates technical modifications, suggestions, and NCP's developed within and outside the sector as required.

(2) Supports the regional technical inspection program as directed by the Airway Facilities division manager.

(3) Provides sector engineering/technical support in the resolution of technical problems within and outside the sector when assigned by the sector or assistance is requested by the Airway Facilities division or national support group. Provides technical reports on problems to the region and sector elements.

(4) As assigned, serves as TOR for contract programs.

(5) As assigned, provides site-unique system integration engineering for regional operations, F&E, and Washington headquarters.

(6) Provides engineering assistance to other sectors or regional branches as required to meet operational requirements.

(7) Prepares specifications for regional/sector contracts.

(8) Exchanges engineering information on unique or unusual problems with other sectors, regional engineering branches, Washington headquarters offices, or contractor support personnel.

(9) Provides membership on national/regional teams of expertise for solution of evasive or system-wide hardware and software problems.

b. Regional engineering duties performed for the sector office.

(1) Provides timely and effective follow-up on facility performance. This includes reviews of the technical performance and operation of facilities aimed at maintaining or improving reliability, availability and efficiency, and initiating/ implementing technical improvements.

(2) Develops engineering plans and monitors implementation of sector accomplished F&E, CERSG, and FMP projects.

(3) Provides analysis of composite and individual radar data provided by associated radar systems.

(4) Manages and administers the environmental and energy conservation programs.

(5) Evaluates facility and system performance to improve service to NAS users and provides real-time engineering support for operational systems and equipment.

(6) Provides assistance to the operations group in evaluating pilot reports and Air Traffic discrepancy reports.

c. Routine correspondence, NCP's, employee suggestions, engineering project status reports, engineering studies, or other written technical documentation will be prepared in final form by the TSS according to prescribed guidelines prior to forwarding to the responsible engineering branch manager for signature and/or coordination.

6. ENGINEERING SUPPORT RESPONSIBILITIES PROVIDED TO THE TSS BY REGIONAL ENGINEERING BRANCHES. The engineering branches are responsible for engineering support (except as delegated by this order) and overall engineering program management. Guidance and direction in these matters must be provided to the sectors for their application to engineering support activities.

7. TECHNICAL SUPPORT RESPONSIBILITIES PROVIDED TO SECTORS BY THE TSS. In addition to sector engineering functions, the sector TSS will generally assist the technical efforts of the sector work by providing the following quality assurance and technical support functions as identified in appendix 2.

8. TECHNICAL SUPPORT RESPONSIBILITIES PROVIDED TO THE TSS BY THE REGIONAL ENGINEERING BRANCHES. The regional engineering branches are responsible for supplementing sector technical support efforts and providing technical support as it relates to overall program management. Liaison, guidance, and assistance in these matters must be provided to the sectors for their application to sector technical support.